

Document Type: EA-Administrative Record
Index Field: Final Environmental Document
Project Name: Defoors Brothers Development
Project Number: 2008-66

ENVIRONMENTAL ASSESSMENT

**PROPOSED FILL FOR
DEFOORS BROTHERS DEVELOPMENT
RIVER STREET LUXURY CONDOMINIUMS
ADJACENT TO TENNESSEE RIVER MILE 464.5R
Hamilton County, Tennessee**

PREPARED BY:
TENNESSEE VALLEY AUTHORITY

OCTOBER 2008

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The Proposed Decision and Need

Defoors Brothers Development in Chattanooga, Tennessee, submitted to Tennessee Valley Authority (TVA) on June 23, 2005, an application for approval required under Section 26a of the TVA Act to place approximately 3,800 cubic yards of fill within the 100-year floodplain. The location of the proposed fill and development is adjacent to Tennessee River Mile (TRM) 464.5R (right bank) on Nickajack Reservoir (see Attachment 1, joint Department of the Army/TVA application form for Section 26a approval). The fill would enable construction of luxury condominiums at 600 River Street in downtown Chattanooga. The fill is necessary to elevate the first floor of the proposed development to a minimum of 2 feet above the 100-year flood elevation to comply with Chattanooga's floodplain ordinance. The areas around the building and parking areas would also be raised above the 100-year flood elevation. There would be no docks or other water use facilities associated with the proposed development.

Public Involvement

In accordance with Executive Order (EO) 11988 on Floodplain Management and TVA's Procedures for Compliance with the National Environmental Policy Act (NEPA), TVA published a public notice (Attachment 2) of the proposed fill on its Web site on August 14, 2008. The comment period ended on August 28, 2008. One comment was received that requested information regarding documentation of any notice to affected Indian tribes or to state representatives of the Native American community. TVA responded to the commenter on September 2, 2008 (see Attachment 2).

Alternatives and Comparison

This environmental assessment evaluates two viable alternatives: the No Action Alternative and the Action Alternative (Approve Fill in the Floodplain Alternative).

No Action Alternative

Under the No Action Alternative, TVA would not approve the 3,800 cubic yards of fill to be placed within the 100-year floodplain. The applicant would not be able to develop the property at 600 River Street to build luxury condominiums as presently proposed. The applicant may be able to develop the property with an alternate design not requiring fill in the floodplain.

Action Alternative – Approve Fill in the Floodplain Alternative

Under the Approve Fill in the Floodplain Alternative, TVA would issue Section 26a approval to authorize placement of 3,800 cubic yards of fill within the 100-year floodplain. Placement of fill would enable the applicant to construct the luxury condominiums as presently planned. The placement of fill would be contingent upon completion of the archaeological site mitigation described below.

Alternative Considered but Dismissed

TVA had developed three alternatives to the original proposal building configuration for the applicant to consider. These alternatives consisted of different building footprints/designs that would reduce or avoid adverse effects to an archaeological site. The alternatives and the associated schedule and cost considerations were discussed with the applicant, the applicant's consultant (MAP Engineering), and Steve Leach of the City of Chattanooga's Public Works Department in December 2006. The applicant and his consultant committed to review the additional information and determine which alternative or a variation on one of the suggested alternatives they would consider.

The applicant's criteria for the proposed development include locating the structure as close to the river as possible, the need for an underground garage, and locating so as not to interfere with an existing sewer line. In order for the applicant to develop his property to the greatest investment potential, these limitations made the alternative designs not practicable. The applicant subsequently decided to stay with the project design as originally proposed and to proceed with mitigation of adverse impacts to the archaeological site.

No additional alternatives were proposed by respondents to the August 2008 public notice.

Affected Environment and Evaluation of Impacts

Impacts Evaluated

Many of the potential environmental impacts of this proposed action were described in Categorical Exclusion Checklist 10341 (see Attachment 3) in 2005. Based on this review, TVA has determined that the proposed actions would not affect wetlands, endangered or threatened species, navigation, or recreational activities. Maclellan Island, located adjacent to the proposed development (extending from approximately TRM 465 downstream to TRM 464.4), is owned and managed by the Chattanooga Audubon Society. A heron nesting colony is located on the island, and developed recreation facilities on the island include a boat landing, hiking trail, overnight shelter, picnic tables, and wildlife observation platform. TVA has determined that due to the areas on both sides of the island being heavily urbanized with business operations, no impacts to Maclellan Island are expected. Minor, short-term construction-related noise, air, and traffic impacts are expected during site development and are expected to be insignificant. The proposed action would affect floodplains, cultural resources, and water quality and aquatic life; potential impacts to these resources are described below.

Floodplains

As previously mentioned, the proposed Defoors fill and condominium development is adjacent to TRM 464.5. At this location, the 100-year and TVA's Flood Risk Profile elevation (the 500-year flood elevation) are 657.2 and 663.8 feet (National Geodetic Vertical Datum of 1929), respectively. In an e-mail dated July 14, 2005, MAP Engineers

indicated that in order to develop this property so that it would not flood, there are no alternatives to filling in the floodplain. TVA concurs with this finding and agrees that there is no practicable alternative to the proposed fill because the site must be elevated so that the first floor of the building would be at least 2 feet above the 100-year flood elevation and the parking area below the building would not be flooded during a 100-year flood. Based on an August 16, 2005, e-mail from Richard Hutsell, Chattanooga zoning official, to Mike Price, MAP Engineers, the project would comply with Chattanooga's local floodplain regulations. TVA has therefore determined that the proposed project would comply with EO 11988. TVA also indicated from a standpoint of flood control, that it would have no objection (see Attachment 3).

Under the No Action Alternative, TVA would not permit fill within the 100-year floodplain, and the applicant would not be able to construct the proposed luxury condominiums at 600 River Street as presently designed. Under the Action Alternative, TVA would allow the placement of approximately 3,800 cubic yards of fill as requested by the applicant. Defoors would be able to build the luxury condominiums as presently planned.

Cultural Resources

On April 20, 2006, TVA initiated consultation with the Tennessee Division of Archaeology and reported to the Tennessee State Historic Preservation Officer (TN SHPO) the results of a Phase I archaeological survey. The survey was conducted as a result of the Defoors proposed fill request, which identified one site (40HA524) that would require additional archaeological testing to determine its eligibility for listing in the National Register of Historic Places (NRHP) (Alexander 2006). The letter identified the area of potential effects (APE) to be a 2.5-acre development tract and associated borrow area for the fill. The borrow area was determined to have a low potential for archaeological resources. The letter requested comments on the scope of work (SOW) for the proposed Phase II testing (all cultural review documentation is contained in Attachment 5). On April 27, 2006, the TN SHPO concurred that the project area contains archaeological resources potentially eligible for listing in the NRHP and that site 40HA524 should either be avoided by all ground-disturbing activities or subjected to Phase II archaeological testing. The TN SHPO agreed with the proposed Phase II SOW previously provided.

On November 14, 2006, TVA submitted a letter to the TN SHPO agreeing with Alexander (2006) that site 40HA524 meets the criteria for eligibility for listing in the NRHP; specifically, the site is eligible under Criterion D. A Phase II report describing testing conducted to determine the site's eligibility status had previously been forwarded to the TN SHPO (Wolke and Alexander 2006). TVA also informed the TN SHPO that the project as proposed would have an adverse effect on site 40HA524 and that discussions with the applicant were underway to mitigate or avoid anticipated effects. TVA requested concurrence from the TN SHPO on these findings.

Site 40HA524 consists of a multicomponent, deeply stratified site occupied as early as the Early Archaic through the Mississippian periods. TVA's adverse effect determination to the site is based on the following assumptions:

1. The current plans call for excavation of an underground parking facility.
2. The proposed plans would result in a capping of the site, which would no longer allow access to the scientific data that qualifies it for listing in the NRHP.
3. Constructing a large building on the property could result in the compaction of soils that could adversely affect the archaeological deposits contained within.

On June 5, 2008, TVA notified the Advisory Council on Historic Preservation of the adverse effects of the proposed project. On this date, TVA also provided the TN SHPO notification that proposed alternative building designs for the development that would reduce or avoid adverse impacts had been discussed with the developer. After consideration of these options, the developer determined that site 40HA524 could not be avoided, and the project would proceed with the originally proposed design and, therefore, would proceed with Phase III data recovery at the site. TVA had previously provided the applicant a preliminary draft SOW for Phase III investigations (on February 14, 2008 - Attachment 6). TVA also proposed to the TN SHPO to enter into a memorandum of agreement (MOA) to mitigate the adverse effects of the undertaking. A draft MOA was provided to the TN SHPO along with the applicant's proposal for excavation prepared by the developer. Documentation pursuant to 36 CFR 800 Part 800.11(e) was also provided. TVA requested comments on the draft MOA. On June 19, 2008, the TN SHPO responded to the MOA and SOW for the Phase III data recovery (Honerkamp 2008) of site 40HA524 and concurred with the proposed data recovery outlined in the SOW.

On June 8, 2008, TVA provided correspondence to the 16 affected federally recognized Indian tribes inviting comment on the proposed MOA and SOW for Phase III data recovery of the site. The Jena Band of Choctaw Indians responded on July 3, 2008, that there would be no significant impacts concerning the Jena Band.

TVA submitted a final MOA to the TN SHPO on August 29, 2008. The MOA (Attachment 7) outlines the treatment of the adversely affected site and demonstrates compliance with Section 106 requirements. The MOA stipulates the treatment plan agreed upon by TVA, the TN SHPO, and the other consulting parties. The expected treatment plan would be data recovery of the site including monitoring, field excavation, laboratory analysis, and report writing. Data recovery of site 40HA524 is designed to answer specific research questions that are defined in a research design included in the MOA. The Phase III archaeological survey would be conducted to provide information on early Native American habitation of this area. The archaeological record would likely yield further information on the prehistory of the Tennessee River Valley. The TN SHPO approved the MOA on September 3, 2008.

Under the No Action Alternative, the applicant would not be permitted to place fill within the 100-year floodplain at the 600 River Street location. The Phase III data recovery would not occur. The applicant would not be able to construct the proposed condominiums as presently designed but could possibly develop the property with an alternate design. Under the Action Alternative, the applicant would be permitted to fill and build the condominiums at 600 River Street in downtown Chattanooga after the required commitment to a Phase III archaeological investigation.

Water Quality and Aquatic Life

The project, located on the north shore of the Tennessee River near TRM 464.5R on Nickajack Reservoir in Hamilton County, Tennessee, involves 2.5 acres of land previously occupied by Fehn's Restaurant in downtown Chattanooga. The restaurant facilities have all been demolished, and the property consists of a grassy lawn and adjacent parking area. Examination of soil boring data indicated that the site contains fill previously placed that extends a depth of 1 foot to 8 feet across the property.

Construction of the proposed development has the potential to impact water quality and aquatic life in the adjacent Tennessee River from storm water runoff. The applicant's Section 26a application dated June 23, 2005 (see Attachment 1), includes a detailed *Grading and Erosion Control Plan*, which when implemented properly would reduce the potential impacts to water quality and associated aquatic life from surface water runoff to insignificant levels. A National Pollutant Discharge Elimination System permit was submitted to the Tennessee Department of Environment and Conservation on May 24, 2005.

Mitigation Measures

The applicant would be required to comply with the terms of the MOA for data recovery from archaeological site 40HA524.

Preferred Alternative

Upon execution of an MOA agreeable to the applicant, the TN SHPO, and TVA, TVA would issue approval under Section 26a of the TVA Act to enable the developer to place fill on his property at 600 River Street in Chattanooga, Tennessee.

TVA Preparers

Dan Fisher	Land Use Specialist, Project Manager (retired)
Kelie Hammond	Navigation Program Manager, Navigation
Martin High	Watershed Program Manager, Wetlands, Migratory Birds, Terrestrial Ecology, Endangered and Threatened Species
Mary McBryar	Environmental Scientist, Document Review
Roger Milstead	Flood Risk Program Manager, Floodplains
Charles Nicholson	NEPA Program Manager, Document Review and NEPA Compliance
Ken Parr	Senior NEPA Specialist, NEPA Project Manager
Erin Pritchard	Archaeologist, Cultural Resources

Agencies and Others Consulted

Absentee Shawnee of Oklahoma	Kialegee Tribal Town
Alabama-Coushatta Tribe	Muscogee (Creek) Nation of Oklahoma
Alabama-Quassarte Tribal Town	Seminole Indian Tribe
Cherokee Nation of Oklahoma	Seminole Nation of Oklahoma
Chickasaw Nation	Shawnee Tribe
Choctaw Nation of Oklahoma	Tennessee Department of Environment and Conservation
City of Chattanooga, Zoning Official	Tennessee State Historic Preservation Officer
Eastern Band of Cherokee Indians	Thlopthlocco Tribal Town
Eastern Shawnee Tribe of Oklahoma	United Keetoowah Band
Jena Band of Choctaw Indians	

References

- Alexander, L. S. 2006. *Phase I Archaeological Survey of a Proposed 2.5-Acre Development Parcel on Tennessee River 464.5R in Chattanooga, Hamilton County, Tennessee*. Wildwood, Ga.: Alexander Archaeological Consultants.
- Honerkamp, N. 2008. *A Proposal for Phase III Archaeological Data Recovery of a Proposed 2.5-Acre Development Parcel at Tennessee River Mile 464.5 in Chattanooga, Hamilton County, Tennessee*. Presented to MAP Engineers and Tennessee Valley Authority May 9, 2008. Chattanooga, Tenn.: Jeffrey L. Brown Institute of Archaeology, University of Tennessee at Chattanooga.
- Wolke, D., and L. S. Alexander. 2006. *Phase II Archaeological Survey of a Proposed 2.5-Acre Development Parcel on Tennessee River 464.5R in Chattanooga, Hamilton County, Tennessee*. Wildwood, Ga.: Alexander Archaeological Consultants.

Attachments

- Attachment 1. Department of the Army/TVA Joint Application Form (Section 26a fill request)
- Attachment 2. Public Notice, Comment Made in Response to Public Notice, and TVA Response to Comment
- Attachment 3. Categorical Exclusion Checklist 10341
- Attachment 4. Floodplains Correspondence
- Attachment 5. Cultural Resource/TN SHPO/Indian Correspondence
- Attachment 6. Preliminary Draft Scope of Work for Phase III
- Attachment 7. Memorandum of Agreement